

METHOD AND SYSTEM FOR CACHE COHERENCE IN DSM  
MULTIPROCESSOR SYSTEM WITHOUT GROWTH OF THE SHARING  
VECTOR

ABSTRACT OF THE DISCLOSURE

The present invention is directed to a method and a system for maintaining cache coherence in a distributed shared memory (DSM) multiprocessor system. The method begins with a receiving of a shared access request by a receiving node, where the receiving node is an arbitrary node having at least one main memory unit containing information desired to be accessed. Then, the method determines whether the shared access request originates from a local node or from a remote node. When the shared access request originates from a local node, the shared access request is processed as a shared access request. If the shared access request is granted, a sharing vector is generated or updated to reflect the sharing local node(s). When the shared access request originates from a remote node, the shared access request is converted to an exclusive access request and the sharing vector is replaced with a pointer to the requesting remote node. This limits the potential size of the sharing vector according to the local nodes.

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